



.. THE ..

ANNUAL REPORT

UPON THE

Health ☼ and ☼ Sanitary ☼ Condition

OF THE

BOROUGH OF TUNBRIDGE WELLS,

For the Year ended the 31st December, 1902,

BY

WM. STAMFORD,

Licentiate of the Royal College of Physicians, London,

Fellow of the Royal Institute of Public Health,


*Fellow of the Incorporated Society of Medical Officers
of Health.*

MEDICAL OFFICER OF HEALTH FOR THE BOROUGH.



Tunbridge Wells :

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Medical Officer of Health's Report

For the Year ending December 31st, 1902.



*To the Mayor, Aldermen and Burgesses of the Borough of
Tunbridge Wells.*

GENTLEMEN,

It is with great pleasure that I lay before you my Report upon the Health and Sanitary condition of the Borough of Tunbridge Wells, for the year ending December 31st, 1902.

In 1900, I was able to record the lowest Death-rate, with one exception, for ten years. The following year this was practically maintained, and it is most gratifying to find that during the year 1902 there was again the same evidence of an exceptionally light mortality, the Death-rate being precisely that for 1900.

More encouragement could hardly attend the effort of any Sanitary Authority, than what may be derived from a study of the mortality from Zymotic diseases affecting the health of this Borough. During 1902 I have to report so light a loss from these diseases, that from a statistician's point of view, it forms an almost negligible quantity, and represents a state of things which may well inspire the envy of much less urban boroughs, throughout the length and breadth of England.

Population.—The population of the Borough, calculated as for June 30th, 1902, by the method I have adopted for many years, which has been shewn to be reliable by two census verifications, was 33,773, as against 33,433, for the year previous, being an increase of 340.

Births and Birth-Rate.—The births registered during the year numbered 680—334 males, and 346 females—as against 673 for the previous year; being an increase of seven births.

The Birth-rate per 1000 of the estimated population was 20·1, the same as that for the year 1901. During the same period, the general Birth-rate for England and Wales was approximately 28·6, which shews the birth-rate of the Borough to be an exceptionally low one. The Death-rate is affected by a low Birth-rate, inasmuch as it means the introduction of a smaller number of lives under one year of age. In this period of life mortality is heavier than during any other period. By a low Birth-rate therefore, the Death-rate

benefits during the year immediately concerned; but if continued year after year, as it is in this Borough, it signifies a smaller number of young lives between the ages of five and twenty-five, among whom the Death-rate is exceedingly low, than would be otherwise present. This factor about balances the other; but the rate of infant mortality is very low in Tunbridge Wells; so that a larger proportion of the children born enter the period between five and twenty-five than is the case generally. In this way the low Birth-rate of the Borough becomes adverse to the Death-rate, by limiting the introduction of healthy young lives to the period of least loss.

Deaths and Death-Rate.—The number of deaths recorded during the year was 430, being a decrease of 2 from the number registered during the year 1901, notwithstanding an estimated increase of 340 in the number of inhabitants.

The death-rate per thousand of the population was 12·7, which is a slight fraction less than that for 1901, and precisely the same as that for 1900, which was the lowest for the decade, except that for 1897, and considerably below the mean for ten years.

TABLE I.

COMPARISON OF DEATH-RATES FOR TEN YEARS.

1893	...	..	...	14·8
1894	...	...	...	13·4
1895	...	...	...	13·3
1896	...	...	...	13·7
1897	...	...	...	12·2
1898	...	...	...	13·8
1899	...	...	...	14·8
1900	...	...	...	12·7
1901	...	...	...	12·9
1902	...	...	...	12·7
The mean Death-rate for Ten Years				13·4

The death-rate for England and Wales, as extracted from the returns of the Registrar-General, was 16·3 per thousand living.

Correction of Death-Rate, and Foreign Mortality.—For a number of years I have made a point of directing your attention to the incidence of foreign mortality upon the statistics I have to place before you. By foreign mortality I mean that not properly belonging to the people of Tunbridge Wells, though taking place within its confines, and therefore included in my returns. In many cases this loss would not materially affect the figures of a district, but in this Borough it is a feature of much importance. It concerns me that it should be appreciated as being a disturbing factor,

demanding correction and consideration, before the health of this Borough can be rightly gauged and understood. I again find, as I have done before, that this foreign mortality affects the statistics to so great an extent as to introduce one in every ten deaths, or, in other words, one for every nine deaths among the residents proper.

For this purpose I take out the deaths of those persons who were brought from other places to the General Hospital for treatment, or who at the time of their decease had only been living here for a period of three months or under, and this does not by any means cover the mortality brought into the statistics in this way. This will become very evident when you consider the large number of invalids and aged people, who retire to the salubrious surroundings and healthful conditions provided for them here; many to linger out the last span of life among the beautiful prospects and under the influence of the invigorating atmosphere, which cannot easily be found elsewhere.

I find the number of deaths so to be dealt with during 1902 was 43, as against 36 in 1901, and 42 in each of the preceding two years. After deducting these 43 deaths from the total from all causes, I strike a corrected death-rate of 11·4, instead of 12·7, per thousand living.

The foreign mortality was spread over the four quarters of the year as follows :—

First Quarter	...	...	...	9 deaths.
Second „	...	...	...	13 „
Third „	...	...	...	12 „
Fourth „	...	...	...	9 „
Total				43

TABLE II.

SHEWING THE INFLUENCE OF FOREIGN MORTALITY UPON THE DEATH-RATE OVER A PERIOD OF TEN YEARS.

		Death-rate.		Corrected Death-rate.
1893	...	14·8	...	12·9
1894	...	13·4	...	11·7
1895	...	13·3	...	12·0
1896	...	13·7	...	11·8
1897	...	12·2	...	11·1
1898	...	13·8	...	12·8
1899	...	14·8	...	13·4
1900	...	12·7	...	11·0
1901	...	12·9	..	11·8
1902	...	12·7	...	11·4

Quarterly Returns.—As most frequently happens, the first quarter was accountable for the heaviest mortality; after which came the last; then the second; and the third was that wherein there was least loss of life.

During the first quarter, the prevalence of Influenza was indicated by a loss of 11 lives, recorded as the direct consequence of this disease; but there were some deaths registered as having been due to various respiratory diseases which were brought about by an initial attack of this disorder.

TABLE III.

SHEWING THE MORTALITY AND DEATH-RATE FOR THE FOUR QUARTERS.

	Total number of Deaths.	Death-rate per 1000 per annum.	Number of Deaths foreign to the Borough	Corrected Death-rate.
1st Quarter...	131	15·5	9	14·48
2nd Quarter...	98	11·6	13	10·04
3rd Quarter...	94	11·1	12	9·68
4th Quarter...	104	12·6	9	11·55

TABLE IV.

SHEWING THE QUARTERLY DEATH-RATES FOR FIVE YEARS,
PER 1000 PER ANNUM.

	1898.	1899.	1900.	1901.	1902.
1st Quarter... ..	20·8	14·1	16·5	15·2	15·5
2nd Quarter... ..	10·8	13·1	10·4	13·3	11·6
3rd Quarter... ..	12·1	14·0	12·7	10·9	11·1
4th Quarter... ..	12·0	17·9	10·6	12·0	12·6

Mortality at Several Ages.—Table V. shews the mortality at the several ages contrasted for five years

TABLE V.

	1898.	1899.	1900.	1901.	1902.
Deaths at under 1 year ...	71	75	78	55	70
" " 1 and under 5 ...	35	25	14	47	29
" " 5 " 15 ...	36	14	17	13	13
" " 15 " 25 ...	16	20	23	19	11
" " 25 " 65 ...	121	150	122	149	134
" " 65 and upwards ...	145	176	145	147	173

Infant Mortality.—During the year 1902 there were 70 deaths recorded as having taken place during the first year of life. The number of births was 680. Of the 70 infants who died, 23 were born prematurely, and their deaths were attributed to that cause. The rate per thousand born was 102·9.

This is a very low infant mortality, as will appear from reference to the Registrar-General's Returns for the whole country, whereby it appears that out of 1000 born no less a number than 133 died during the first year of life.

It is at once evident that we are in some measure indebted to this low mortality among the children for the low general death-rate which obtains in this Borough. No factor in the vital statistics of a district is more potent to effect fluctuations in the death-rate, and a low infant mortality rate speaks most eloquently of sanitary proficiency, and of the healthful conditions of food and air, under which the community exists.

Notwithstanding our excellent position in this respect relatively to many other places and the country generally, it is a sad reflection that many of these young lives are lost from preventable causes, and I have many times pointed out how easy it would be for those having charge of young infants to secure them against death from causes connected with the assimilation of food, by the careful provision of fresh and uncontaminated milk. To render this possible, I have advocated the compulsory addition of a perfect larder even to the smallest cottage a thing of the utmost importance, and one that is often disregarded. It is no uncommon discovery, when inspecting houses, to find the place for the preservation of food selected as though the need had been hit upon as an afterthought, when no other more fitting was available. Under the stairs, or beside the least desirable neighbouring apartment, or adjoining the kitchen boiler, seems to fascinate the ingenious builder of cottage property where economy of space is a first principle, for placing the most important enclosure of the whole fabric.

While I cannot refrain from again referring to this, I yet feel there is great reason for a feeling of pride, that the effort put forth for so long, to effect a reduction of the infant mortality, has given us perhaps the healthiest town of its size in England, for young children.

TABLE VI.

SHEWING THE INFANT MORTALITY RATE FOR TEN YEARS.

1893	...	Per Thousand Born	...	110
1894	...	"	"	88
1895	...	"	"	112
1896	...	"	"	117
1897	...	"	"	97
1898	...	"	"	116
1899	...	"	"	119
1900	...	"	"	121
1901	...	"	"	81
1902	...	"	"	102

Mortality at Advanced Ages.—The fact that so many aged people come here to spend the evening of their lives, among the favourable conditions afforded by the Borough for the attainment of an exceptional longevity, speaks well for the repute in which the district is held, but from the point of view of the vital statistician it becomes one of the disturbing factors, and brings about an increase in the number of deaths. Though this increase is of a laudable character, it nevertheless has to be borne in mind, for unless we do so, we credit the district with the additional mortality without thinking of the excellence of the influences that introduce it. That the Borough attracts aged lives which materially affect the death-rate will be evident when I state that out of a total of 430 deaths there were no less than 195 registered as having taken place at ages beyond sixty, which is equal to rather better than 45 per cent. of the whole mortality of the Borough.

The following is a summary of the deaths at the several ages beyond sixty :—

Over 100 years	...	...	...	1 death.
Under 100 and over 90 years	...	...	...	8 deaths.
„ 90	„	80	„	47 „
„ 80	„	70	„	78 „
„ 70	„	60	„	61 „
Total				195 „

Zymotic Diseases.—This is by far the most important class of diseases from a sanitarian standpoint. Against it are directed

practically all the efforts of the Sanitary Staff, and it claims my own continual watchfulness. Energetic action has been taken for many years in dealing with every adverse circumstance, and in the employment of useful devices for minimising the loss of life from the preventable causes included under this heading. After the anxieties of a period wherein there were alarms of an extraordinary nature, owing to the prevalence of Smallpox throughout the country, more especially in London, and the increase in the number of cases of Diphtheria reported from so many places, it is most gratifying to be able to record the pleasing statement that in this Borough there were only eight deaths from Zymotic Diseases, all told. Last year I had to report that for a period of six months there was no death from diseases of this class, and a zymotic death-rate of only 1·3 per thousand of the population. I have this year to record the even more satisfactory low zymotic death-rate of 0·2 per thousand of the estimated population. The rate for the country generally, as extracted from the Registrar-General's Returns, was 1·64.

TABLE VII.

SHEWING THE MORTALITY FROM ZYMOTIC DISEASES
FOR TEN YEARS.

	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Scarlet Fever	0	1	0	0	2	0	1	0	0	1
Enteric	2	1	0	0	1	1	4	0	2	1
Erysipelas	2	1	0	0	1	1	4	2	4	0
Diphtheria	9	5	8	14	10	31	7	3	1	2
Diarrhœa and Dysentery ...	8	0	3	2	2	15	15	13	4	1
Smallpox	0	0	0	0	0	0	0	0	0	0
Measles	2	0	0	10	0	0	10	0	11	2
Whooping Cough	10	2	10	2	12	9	4	1	21	1
Croup (Membranous)	1	1	0	1	1	0	0	0	0	0
Total number of Deaths from Zymotic Diseases ...	34	11	21	29	29	57	45	19	43	8
Percentage upon the number from all Causes	7·9	2·9	5·3	7·4	7·8	13·4	9·7	4·7	10·0	1·8
Zymotic Death-rate per 1000 Living	1·2	0·3	0·7	0·9	1·9	1·8	1·4	0·6	1·3	·02

Scarlet Fever.—This disease was the cause of only one death, which occurred during the convalescence of the patient, who being a delicate child, succumbed to asthenia or debility. There was a slight increase in the number of cases notified. Last year there

were 31 notifications, which was a fall from 67 in 1899. This year there were 43, or an increase of 12.

On reference to Table VII. it will be seen that it is three years since there was a death from Scarlet Fever in Tunbridge Wells, and that for a period of ten years there had only been five lives lost from this cause.

The beneficial effect of the working of the Infectious Diseases (Notification) Act is so apparent, that no effort should be spared to bring its provisions before parents, nor in the enforcement of the penalties for its breach. Parents have not yet sufficiently realised the importance of the early isolation of their sick children; and many are allowed to run about and attend school, who are suffering from a mild form of Scarlet Fever, though they do not appear to require the attendance of a doctor. These are the cases that do the mischief, and to detect which school masters and mistresses should be on the alert. A medical certificate should be required from every child returning to school after an absence, to make sure they have not come from an infected home. Especially should their attention be called to the fact that the desquamative stage of Scarlet Fever is that wherein the spread of infection is most to be dreaded; in this stage the children are often so apparently well, that parents who have not sought medical advice are very apt to return them to school.

Of the cases notified, 40 were admitted for treatment to the Sanatorium. In every case the house was thoroughly disinfected. During the year I made frequent visitations to schools, and every precaution was taken to minimise the presence of the disease, with most satisfactory results.

Enteric Fever.—There were 16 cases of this disease notified as having occurred in the Borough, seven of them in one cottage in the St. John's district. The series was commenced by the illness of a boy, the nature of which was not diagnosed. In my opinion, the other cases of the series were the consequence of this failure to diagnose the character of the first case, and of the inefficient nursing it received. Three of the seven cases were removed into the Union Infirmary, where two died. There were nine other cases of the disease, but five of these were traced as having been imported. The total mortality from Enteric Fever was one case.

The requirement of hospital accommodation for cases of Enteric Fever has pressed itself upon me for a long time, and I have before made representations to you upon the subject. I hope that when the new General Hospital is opened some arrangement may be made whereby I may have cases removed to it, without the present necessity of first obtaining a Subscriber's Letter.

Erysipelas.—There was no mortality from this disease.

Diphtheria.—This disease caused only two deaths. The notifications numbered 23. This is a considerable reduction upon the number of cases which occurred during the previous year, when there were 31 notifications; and though there was one more death, the mortality can only be looked upon as an exceedingly low one as compared with the returns from other places and the country generally. Seventeen of the 23 cases were removed to the Sanatorium for treatment, all of whom recovered and were discharged cured, except one which was moribund when admitted.

The gratuitous supply of Antitoxin to medical practitioners for use where the circumstances of the patients were such that the expense would have prevented its employment, was continued, and considerable demand was made for the privilege of obtaining the services of the Clinical Research Society to report upon the presence of the specific organism, in cases where the diagnosis was in doubt.

Diarrhœa and Dysentery.—There was only one death from these diseases, which speaks very highly for the sanitary condition of the Borough, especially during the Summer, when there is a great liability to their prevalence among children who are artificially fed, and who depend largely upon milk for their nourishment. It is a pleasure to me to be able to report that there have been only five deaths from these causes during a period of two years.

Smallpox.—Again, as last year, we had no mortality from this disease, though there were again two imported cases to deal with. Happily, they were satisfactorily isolated at once, and the spread of the disease checked before any of the inhabitants of the Borough were affected. How providential has been our continued immunity during the state of epidemic in the Metropolis, with which we are in such intimate relationship, can perhaps only be realised by those who have as it were stood on sentry duty throughout this trying time. The cases which were imported were followed up by the Sanitary Staff with a most vigorous activity. The houses where they were detected were sprayed after the removal of the patients to the Dislingbury Smallpox Hospital, where they received every attention from Dr. Tew, the Medical Officer, and the Nursing Staff of that most useful Institution. Clothing and bedding were destroyed where necessary. Throughout the Spring and Summer, the lodging houses were inspected by myself personally, and by the Sanitary Inspector, and every precaution was taken to prevent the importation of this disease.

Measles.—There were two deaths from this disease.

Whooping Cough.—This disease caused one mortality. Last year it was the cause, with Measles, of the greater part of the zymotic mortality. Together they accounted for 32 deaths in 1901, against only three in 1902.

Membranous Croup was the cause of no mortality.

Notification of Infectious Diseases.—Under the provision of the Infectious Diseases (Notification) Act, 1899, there were 99 notifications made to me. They were as follows :—

Scarlet Fever	...	...	...	43 cases
Diphtheria	...	...	...	23 „
Smallpox	...	...	...	2 „
Enteric Fever	...	...	...	16 „
Erysipelas	...	...	...	15 „
Total...				99

Last year there were 91 notifications.

During the year Chicken-pox was made a notifiable disease under the Act, as a temporary measure, and 139 cases of the disease were notified to me. As there no longer exists any need for this measure of precaution against Smallpox, I have advised its discontinuance.

I have again to thank the members of the Medical Profession for the prompt notification of cases of infectious disease occurring in their practices, and for the endeavours they have made to assist the working of the Act.

Tuberculosis.—I would again call your attention to the importance of doing what may be done towards stamping out this fell destroyer of young lives. Patients suffering from the disease should as far as possible be isolated, and occupy roomy and well-ventilated apartments. They should not be allowed to spit upon the floors of rooms and workshops. They should be provided with receptacles containing a disinfectant, into which they should be taught to spit. Outside, especially when using a public thoroughfare, they should employ a spitting pot made for the purpose, that can be carried about, or pieces of rag, which can be burnt when they return home.

Re-Vaccination against Smallpox.—I am glad to know that this has been most thoroughly carried out in the Borough, and it now constitutes a most efficient security against future outbreaks, while it has served as a safeguard during the period of alarm through which we have passed.

Sanitary Work.—The sanitary work done during the year has again been very heavy, and full details will be found in the Chief Inspector's Report. More attention has been paid to the sewers than in former years, which has thrown much work upon the Sanitary Department. The new Factory Acts, and the orders made under them, have also added very much to the duties.

Water Supply.—The water supply has been again abundant throughout the year, and a constant supply has been given to the residents of the Borough and those of adjoining districts supplied by the Corporation. The new filter beds have been completed and used, thus ensuring the absolute purity of the supply. This and the remarkable softness of the water is a very great boon to the inhabitants. An additional Artesian well in the Jeffries Valley has been sunk, and will be used should occasion require it.

Sanatorium.—There were 57 cases admitted during the year, as against 52 last year, which was a smaller number than for several years past. The cases were as follows :—

Scarlet Fever ...	...	...	...	40 cases.
Diphtheria ...	...	...	...	17 „

All the cases admitted into the Institution recovered except two, one, being that of a delicate child, which having come through Scarlet Fever, had not sufficient reserve of vitality to convalescence, and died of asthenia. The other was a Diphtheria case admitted in a moribund condition.

The Staff has given me every satisfaction, its members having done their duty in a praiseworthy manner, and with the exhibition of much tact and kindness where the patients were concerned.

Smallpox Hospital.—It is with pleasure that I record the fact that the Smallpox Hospital so much required, has been established under the joint management of a Hospital Board, appointed by the Urban Districts of Tunbridge Wells, Tonbridge, and Southborough, and the Rural District of Tonbridge, and placed under the supervision of an efficient Staff.

Health of the Borough.—The health of the Borough at the close of the year is most satisfactory in all respects, there being an almost complete immunity from diseases of a zymotic order.

I am,

Your obedient Servant,

WM. STAMFORD.

SUMMARY OF MEDICAL OFFICER OF HEALTH'S REPORT

For Year ending December 31st, 1902.

Estimated Population to June 30th	...	...	...	...	...	...	...	33773
Number of Deaths	...	...	...	...	...	...	...	430
Rate per 1000	...	...	...	...	...	...	...	12.73
Zymotic Deaths	...	...	...	...	...	...	...	8
Rate per 1000	...	...	...	...	...	...	...	.02
Visitors	...	...	...	43	Corrected Death-rate	...	...	11.45
Number of Births	...	Boys	334	Girls	346	...	Total	680
Rate per 1000	...	...	...	...	...	...	...	20.13
Infantile Mortality	...	70	...	Rate per 1000 born	...	...	...	102.96

CAUSES OF, AND AGES AT, DEATH.

CAUSES OF DEATH.	Deaths in whole District at subjoined Ages.							Deaths in Public Institutions.
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	
Measles	2		2					
Scarlet Fever	1		1					
Whooping Cough	1	1						
Diphtheria and Membranous Croup	2		1	1				
Fever { Typhus	...	...	...	...	...	...	...	...
Enteric	1		1					1
Other Continued	...	...	...	...	...	...	...	...
Epidemic Influenza	15	1			1	6	7	
Diarrhœa	1	1						
Enteritis	7	5	1				1	1
Phthisis	29			2	5	22		1
Other Tubercular Diseases	17	3	10	1		3		3
Cancer, Malignant Disease	39			1		24	14	5
Bronchitis	39	6	2			10	21	
Pneumonia	18	4	4			2	8	1
Pleurisy	1					1		
Other Diseases of Respiratory Organs	3	2				1		
Alcoholism	...	...	...	...	...	...	...	...
Cirrhosis of Liver	5					4	1	1
Venereal Diseases	2	2						1
Premature Birth	23	23						
Diseases and Accidents of Parturition	2	1				1		
Heart Diseases	54	1		3	2	14	34	6
Accidents	15	1	1	1	1	9	2	3
Suicides	2					2		1
All other Causes	151	19	6	4	2	35	85	19
All Causes	430	70	29	13	11	134	173	43

PUBLIC HEALTH DEPARTMENT,

10, CALVERLEY PARADE,

January, 1903.

SIR,

I have the honour to present to you my Ninth Annual Report upon the work of the Public Health Department.

It is my privilege to again show a good record ; and although in some respects the figures are not so large as in previous years, the works carried out have been none the less important and useful ; and this fact must be borne in mind—that your Inspectors cannot go into one street and do, say, twenty inspections or testings right off in one day, as they could a few years ago, because, having carried out house-to-house inspection throughout the poorer class property in the town, the work is now distributed in a far greater measure.

I have in several previous reports recognised the fact that, in a Town of so many years' standing, old work carried out in bygone days, when there was little or no supervision, will be continually under notice for some time to come ; but those old and faulty constructions are growing less year by year, and the general health of the town must in the main benefit thereby.

I cannot say that the year under review has been of any particular importance, excepting with regard to the new Factory and Workshop Act and Combined Drainage.

In carrying out the work detailed in the appended tables, I have been able in many cases to go a little in advance of the Public Health and Local Acts, by reason of the opposition to sanitary reform growing weaker as time goes on.

House-to-House Inspection.—The system of house-to-house inspection has been carried out as usual, and many minor defects found in places where previous inspections have been made, and improvements carried out. I regret to say that in many cases it is the fault of the tenants themselves. There is no question that many of the occupiers in the poorer class property absolutely set at defiance all law of order and decency; and so long as they do this, so long will sanitary progress and the happiness of everyone living near them be impeded; it is a great hindrance to those who recognise the part they should play in life, to make it sweeter than it is to-day.

TABLE I.

LIST OF WORKS CARRIED OUT DURING 1902.

122	Drains have been re-constructed.
64	Drains have been repaired.
102	Manholes constructed.
80	Drain ventilation shafts erected.
66	New soil pipes erected.
243	W.C.'s have been properly trapped and provided with flushing apparatus.
387	Efficient traps have been substituted for inefficient ones.
152	Rain-water and waste-pipes have been disconnected from drains and made to discharge over properly trapped gullies.
161	Yards and areas have been repaved or had the existing paving relaid.
22	New W.C.'s built and fitted.
23	Houses provided with a sufficient supply of water.
105	Dustbins have been provided or repaired.
869	Houses have been newly inspected.
2603	Visits of re-inspection, or to works in course of progress have been made.
321	Offensive accumulations removed.
14	Pigs removed.
2196	Inspections of stables or manure pits.
10	Samples of water have been submitted for analysis.
3	Wells and cesspools have been abolished.
357	Premises in respect of which notices have been served.
37	Rooms purified and cleansed.
11	New sinks provided.
1	Case of overcrowding abated.
43	Defective cisterns abolished, and water supply taken from rising main.
1608	Visits to factories, workshops, slaughter-houses, cowsheds, dairies, bakehouses, and common lodging houses.

TABLE II.

COMPARATIVE TABLE OF WORKS CARRIED OUT DURING THE PAST NINE YEARS.

	1894	1895	1896	1897	1898	1899	1900	1901	1902
Drains have been re-constructed	9	27	56	62	166	305	179	269	122
Drains have been repaired	17	19	54	80	197	168	169	71	64
Manholes constructed	...	...	28	32	73	65	92	178	102
Drain ventilation shafts erected	24	35	38	53	241	276	160	208	80
New soil-pipes erected	15	21	21	29	64	34	16	40	66
W.C.'s have been properly trapped and provided with flushing apparatus	101	164	114	172	459	721	554	513	243
Efficient traps have been substituted for inefficient ones	120	213	302	330	746	913	476	557	387
Rain-water & waste-pipes have been disconnected from drains and made to discharge over properly trapped gullies	...	40	60	92	249	340	207	283	152
Yards & areas have been repaved or had existing paving relaid	13	...	...	...	412	471	260	312	161
Houses provided with a sufficient supply of water	84	124	140	132	...	18	345	476	23
Dustbins have been provided or repaired	...	...	...	...	145	235	35	78	105
Houses have been newly inspected	247	304	287	440	3815	1194	439	936	869
Visits of re-inspection, or to works in course of progress have been made	193	604	690	780	423	5593	3888	3164	2603
Offensive accumulations removed	130	223	117	230	22	56	38	121	321
Pigs removed	2	...	11	9	...	9	23	18	14
Inspection of stable yards or manure pits	...	...	...	...	...	...	2256	2794	2196
Samples of water have been submitted for analysis	4	...	...	...	6	6	11	26	10
Wells and cesspools abolished	10	8	9	13	...	...	10	31	3
Cowsheds have been paved and drained	6	...	...	...	...	...	...	...	...
Cases of overcrowding dealt with	8	...	...	...	...	...	...	...	1
Offensive ditches cleansed	2	2	...	...	...	...	...	...	4
Rooms have been cleansed	...	72	87	...	41	...	...	58	37
Roofs repaired	...	...	...	...	...	...	...	13	...
New W.C.'s built and fitted	...	...	...	...	...	...	...	6	22
New sinks provided	...	...	...	...	...	...	...	...	11
Visits to factories, workshops, slaughter-houses, cowsheds, dairies, bakehouses, and common lodging houses	...	...	...	...	...	...	...	...	1608
Visits to flush W.C.'s and drains	...	...	...	...	...	...	...	...	155
Defective cisterns abolished and water supply taken from rising main	...	...	...	...	...	...	...	...	43
Premises in respect of which notices have been served	...	...	...	...	...	...	...	...	...
Visits made to infected houses	358	382	420	...	...	...	279	732	357
Rooms disinfected	197	116	140	445	506	919	405	324	244
Loads of bedding removed to the steam disinfecter & returned to their respective owners	38	39	17	23	217	338	162	145	127
					4	25	11	10	8

TABLE III.

SUMMARY OF PROCEEDINGS.

Premises.	Nature of Offence.	Result.
54, Lower Green	{ Defective drains, insufficient W. C. accommodation & flushing arrange- ments, &c. }	Fined £5 8s. 6d., and ordered to execute works in 21 days.
55 " "		
56 " "		
57 " "		
58 " "		
59 " "		
60 " "		
11, Edward Street, Rusthall	{ Defective drains, insufficient W. C. accommodation & flushing arrange- ments, defective paving, &c. }	Fined £4 7s. od., and ordered to execute works in 14 days.
3 " " "		
9 " " "		
11 " " "		
13 " " "		
15 " " "		
31 High Street, Rusthall		Fined 9/- costs, and Corporation ordered to do necessary works and charge on the estate.
11 Upper Street	Defective drainage, &c.	
7 Duke's Road	Illegal use as a slaughter house.	Fined 42/-, and 21/- costs.
24 Garden Road	Defective sink and waste-pipe.	Fined 5/-, and 10/- costs.

Sewers and Combined Drainage.—I have found it necessary to reconstruct branch sewers at the following places during the year :—

Walters' and Peacock's Cottages, Lower Green.

St. John's Road and Pollard's Cottages.

Cumberland Gardens. Ely Lane.

York Road. Spring Cottages, Denny Bottom.

Edward Street. High Street, Rusthall.

Gladstone Road. Little Mount Sion.

Church Road. Mount Pleasant.

Tunnel Cottages. Goods Station Road.

Standen Street,

At the time of writing I have a special report on above before the Health Committee, and I will reserve my remarks that I would have otherwise made. Suffice to say, the works carried out during the year on private ground have cost the Corporation about £250.

Common Lodging Houses.—There are five of the above on the register, providing, in all, accommodation for 108 lodgers.

They are generally well kept, and the cleansing and lime-washing has been carried out in accordance with the bye-laws.

There were some peculiar connections between the above and several cases of smallpox during the late epidemic in London, and the difficulty of properly dealing with contacts and possibly infected clothing was manifest. It seems only reasonable to suggest that when such a dangerous disease as smallpox breaks out in these houses that no inmate be allowed to leave the house, except to be removed into quarantine, or that they submit to cleansing, disinfection, and vaccination.

House Refuse.—I am pleased to say that the improvement in the removal of house refuse recorded last year is maintained. With regard to the disposal, I beg to refer you to my previous reports.

Sanitary Certificates.—Properties of a total value of £3,069 were surveyed with a view of granting Sanitary Certificates. The total income derived from the work during the year was £33 14s.

The amount would have been £94 17s. 8d., if all possible Certificates had been taken up.

Factories and Workshops.—For some months past all possible time and energy has been concentrated on the above, with a view of compiling a proper register of the various premises under the new Factory Act which consolidates and amends all former legislation on the subject; although I believe I am right in saying that the Public Health Act, 1875, still forms the basis of the law. The administration of the Act is in the hands of H.M. Inspector and the Local Authorities, and the powers and duties assigned to each Authority are so interwoven that it is a difficult matter to dissect them. However our first duty is certainly to prepare the register, and that has been done and there are at the present time 432 premises (including 41 bakehouses) registered therein with a prospect of many more being added. Other duties are—means of escape from fire, general sanitation, and last and by no means least the duties in respect of outworkers and infectious or unwholesome dwellings. The various premises are also to be defined under various headings, thus:—Factories, Workshops, Workplaces, Domestic Factories, and Domestic Workshops.

SAFETY FROM FIRE (Section 14 and 15).—Every factory or workshop employing more than 40 people must, if erected since specified dates, be furnished by the Town Council with a Certificate as to adequate means of escape, and with regard to factories or workshops of older date the Council may serve notice on owner for reasonable provision of escape.

GENERAL SANITATION (Section 6 to 12).—Every workshop must be kept free from effluvia, and limewashing may be ordered on Certificate of Medical Officer of Health or Sanitary Inspector, notice exhibited specifying maximum number of persons to be employed in each room (250 cube feet for each person and 400 during overtime), sufficient ventilation maintained and wet floors must be provided with means of draining off (for some unaccountable reason domestic workshops and workshops having men only employed therein are exempt from the above provisions). Special sanitary provisions are laid down for bakehouses, no underground bakehouse shall be used unless certified by the Council as suitable, they having to be satisfied as regards construction, light, and ventilation. There are several underground bakehouses in the town that will require Certificates if they remain in use, if the Council refuse to certify, the occupier may appeal to the Magistrates who have power to override the Council's opinion and grant the Certificate.

The duty of enforcing proper lavatory and closet accommodation is enforced by H. M. Inspectors by Section 9 of the new Act, but in this Town Section 9 is not in force by reason of the Public Health Amendment Act, 1890, having been adopted and Section 22 conferring the power on the Council.

In pursuance of Section 9 of the Act, the Secretary of State has issued a draft order in respect of the number of W.C.'s, &c., to be deemed sufficient, this Section (as I have already stated not being in force in Tunbridge Wells) does not apply here. I am, however, pleased to say that your Committee passed a resolution in respect of the same under Section 22, Public Health Amendment Act, which compares favourably with the Home Office Order and goes somewhat further in respect of accommodation for females.

OUTWORKERS (Section 107 to 115).—List of outworkers are to be kept on the premises and copies forwarded to Sanitary Authority twice a year in order that the homes may be inspected and work prohibited if the place is unwholesome or notifiable disease exists (even though the patient has been removed).

A large amount of work has been done during the year under the Act, nearly all the registered places have been visited, the bakehouses have received special attention and many improvements are in hand; no Certificates have been issued with regard to safety from fire, there being no factories or workshops employing over 40 hands affected by the specified dates. There has been some difficulty

experienced with regard to outworkers, but the matter is now working smoothly, and lists of outworkers living outside the town have been forwarded to the various Authorities as required by Section 107 (sub-Section 2).

I have to record that no complaint has been received from the Home Office during the year.

Cellar Dwellings.—I have to again record, there are no cellar dwellings in the town.

Smoke Nuisances.—It is satisfactory to note that those chimneys not being the chimneys of private dwelling houses sending forth *black* smoke in such quantities as to be a nuisance, are not the serious offenders they were, very little trouble having been experienced during the year, there is really no reason why black smoke should be emitted at all, provided the owners have their furnaces properly constructed, the draught and boiler power sufficient, and the fireman do their part by paying proper and due attention to the stoking.

Infectious Diseases.—We have another record year so far as the absence of above, and especially with regard to diphtheria.

As soon as a case is notified the place is visited, and the patient removed, if possible at once, and the place disinfected. Disinfectants for cleansing purposes are freely used and distributed gratuitously to the working classes. Notifications are then sent off to the various schools informing them of the infection and requesting them not to allow children from the infected houses to attend school for a stated period. Notifications are also sent when the house is deemed to be free from infection.

The various libraries also get notice in the same manner, this being done to avoid possible infection by books.

A deal of time was devoted during the summer to investigating cases of smallpox that occurred outside the district and contacts who were in peculiar touch with the town. Two cases were imported, but thorough and complete disinfection prevented any spread of the disease.

TABLE IV.

244	Visits have been made to infected houses.
127	Rooms and 2 Public Vehicles disinfected.
8	Loads of Bedding removed to the steam disinfector and returned to their respective owners.
155	Visits to flush W.C.'s and Drains.

Food Inspection.—During the year 363 lbs. of meat and about 40 lbs. of fish have been condemned and destroyed. A constant watch is kept upon the sale of all foods, and especially on costers' barrows and cooked food shops.

Seventy-four trial samples of milk, butter and margarine have been examined.

Thirty-one samples of various food were submitted to the Public Analyst with the result shown in Table V.

One sample of milk was submitted to the Clinical Research Association on suspicion for tubercle, but was found free.

There are only two firms on the Margarine Register (the Register is for manufacturers and wholesale dealers only).

TABLE V.

Description of Samples taken.	No. of Samples.	Analyst's Report.	Proceedings.
Milk	17	<div> <div>14</div> <div>1</div> <div>1</div> <div>1</div> </div> Genuine Low quality 2% of water beyond normal 3% of water beyond normal	Vendor cautioned " "
Butter	5	...	Genuine
Margarine	3	...	"
Cheese	1	...	"
Lard	1	...	"
Vinegar	1	...	"
Pepper	1	...	"
Mustard	2	...	"

During the latter part of the year a quantity of information *re* the oyster supply of the town was obtained for the Local Government Board with instructions that the matter was to be treated as confidential.

Dairies, Cowsheds and Milkshops.—Periodical inspections have been made of above, and with two exceptions (which are being dealt with), the bye-laws have been carried out. The notices sent last year to the various authorities from whose district milk is sent into the town, have caused more attention to be paid to the Dairies and Cowsheds Order.

There are on the register to date, 52 in all.

Cowkeepers and Dairymen, 25.

Purveyors of Milk, 27.

Slaughter Houses.—There are six of the above on the register, no new one having been licensed during the year. No one

will attempt to deny that the slaughter houses are old and some in close proximity to other buildings, but the owners must be given the credit of having kept them in a cleanly condition. Limewashing has been carried out far oftener than prescribed by the bye-laws and excepting on two occasions I have had no cause to complain.

Clinical Research Work.—Someone is always on duty in respect of above up to 10 p.m. (Saturdays and Sundays included).

Use of the Clinical Research Association has been had recourse to on 17 occasions in connection with suspected cases of diphtheria, with the following results :—

The specific organism not found, cases not notified	...	9
„ „ found, cases notified	...	7
„ „ not found, case notified and notification withdrawn	...	1

—
17

Main Sewers, New Houses, &c.—Information obtained from the Borough Surveyor's Department shews that main sewers in the following streets have either been provided, reconstructed, or repaired :—

Hopwood Road.

Christchurch Avenue.

193 Streets and Roads have been regularly swept.

191 New Houses have been built.

6552 Dustbins have been periodically emptied and cleansed.

60 Road Gullies have been re-constructed and properly trapped

Conclusion.—I have made a humble endeavour to describe the works carried out by the department in the foregoing report, and trust my attempt will meet with your approval.

The Assistant Inspectors have carried out their duties with credit to themselves.

I cannot close without tendering my thanks to the Council, the Health Committee, and to you, sir, and the Borough Officials generally, for having at all times rendered me any assistance possible.

I desire to specially thank the Health Committee for enabling me to attend the Sanitary Congress at Middlesbrough last August. The information I gathered in respect of combined drainage and the prevention of smoke nuisances has already justified the time and expense incurred.

I am, your obedient Servant,

JAMES CAVE,

Chief Sanitary Inspector.

W. STAMFORD, Esq.,

Medical Officer of Health.

The greatest heat in the sun was 129 deg. on July 5th.

It first reached	100 deg.	on	March 1st.
"	"	110 "	April 19th.
"	"	120 "	June 3rd.
It last	"	120 "	September 5th.
"	"	110 "	September 24th.
"	"	100 "	October 16th.

The mean solar maximum for the year was 88.4 deg. which is the lowest we have had.

The greatest heat in the shade was 83.3 on July 14th.

It first reached	60 deg.	on	April 17th.
"	"	70 "	May 31st.
"	"	80 "	June 27th.
It last	"	80 "	July 14th.
"	"	70 "	September 22nd.
"	"	60 "	October 10th.

The lowest temperature 4ft. above the ground on Mount Ephraim was 13 deg. on December 7th. The hottest night was September 3rd, when the thermometer did not go below 60.4 deg. The mean temperature of the year was 47.9 deg.; the average being 48.6 deg. The mean daily range was 14.4; the average is 14.8.

The mean temperature of each month was—

January	...	39.9 deg.	July	...	59.7 deg.
February	...	34.3 "	August	...	59 "
March	...	44.2 "	September	...	56 "
April	...	46.5 "	October	...	48.6 "
May	...	47.7 "	November	...	43.7 "
June	...	56.9 "	December	...	39 "

The lowest temperature on the grass was 3.5 deg. on both February 16th and December 7th.

The difference between the wet and dry bulbs at 9 a.m. was greatest (12.6 deg.) on June 28th, the mean being 2.7 deg.

The last frost in the air in Spring was on May 14th, and the first in the Autumn was on October 31st. The last on the grass in Spring was on June 10th, and the first in the autumn was on October 19th. There were 65 frosts in the air and 121 on the grass; the average numbers being 65 and 141 respectively.

The temperature of the soil at the depth of 1ft. was highest (67.5 deg.) on July 9th, and lowest (33.8 deg.) from the 18th to the 22nd of February. The mean was 49.4 deg.; 49.9 deg. being the average.

It first reached	50 deg.	on	April 20th.
"	"	60 "	June 3rd.
It last	"	60 "	September 12th.
"	"	50 "	November 7th.

The means for the months were—

January	...	40·3	deg.	July	...	63	deg.
February	...	35·6	„	August	...	61	„
March	...	43	„	September	...	58·1	„
April	...	47·4	„	October	...	50·4	„
May	...	50·3	„	November	...	44·8	„
June	...	59·5	„	December	...	40·3	„

The Anemometer, showing the horizontal force of the wind, recorded 82,177 miles, which is the least we have had in any year since these observations have been made ; the mean being 89,108 miles.

The most windy day was March 24th, when 681 miles were recorded ; the calmest was December 23rd, when only 39 were shown.

The wind at 9 a.m. was N. on 33 days.

„	„	„	N.E.	„	35	„
„	„	„	E.	„	45	„
„	„	„	S.E.	„	41	„
„	„	„	S.	„	35	„
„	„	„	S.W.	„	50	„
„	„	„	W.	„	83	„
„	„	„	N.W.	„	42	„

It was quite calm on one day.

The rainfall amounted to only 25·19 inches. The average is 29·33 inches. It fell on 177 days ; the average being 172. It came as snow on 15 days. The most in one day was ·92 inch on August 16th.

The rainfall in January was 1·45 inches.

„	February	„	1·62	„
„	March	„	1·77	„
„	April	„	·84	„
„	May	„	2·81	„
„	June	„	2·56	„
„	July	„	1·93	„
„	August	„	3·82	„
„	September	„	·59	„
„	October	„	2·53	„
„	November	„	2·94	„
„	December	„	2·33	„

The mean amount of cloud at 9 a.m. was 7·3 ; 6·6 is the average—10 representing overcast.

There were 12 fogs, and it was slightly foggy on 37 other mornings.

There was thunder or lightning on 16 days, but on only six occasions was it near.

F.G.S.

